

WHAT IS CLAIMED IS:

1. A method of regulating transceiver power consumption for a transceiver in a communications network comprising:

monitoring data received by the transceiver to detect the presence or absence of a received data signal; and

controlling a transceiver state machine to regulate transceiver power consumption in response to the presence or absence of the data received.

2. The method of Claim 1, wherein the monitoring data received occurs during a time period of normal operating power consumption, and upon detecting the absence of a received signal for the first predetermined time, controlling the transceiver state machine to regulate transceiver power consumption to be at minimized operating power.

3. The method of Claim 1, wherein the monitoring data received occurs during a time period of normal operating power consumption, and upon detecting the presence of a received signal for the first predetermined time, controlling the transceiver state machine to regulate transceiver power consumption to be at normal operating power.

4. The method of Claim 1, wherein the monitoring data received includes comparing a received data signal from the communications network with a reference signal and controlling the transceiver state machine when a magnitude of the received data signal exceeds the reference signal.

5. The method of Claim 1, wherein the monitoring data received occurs during a time period of minimized operating power consumption, and upon detecting the absence of a received signal for the first predetermined time, controlling the transceiver state machine to regulate transceiver power consumption to be at minimized operating power.

6. The method of Claim 1, wherein the monitoring data received occurs during a time period of minimized operating power consumption, and upon detecting the absence of a received signal for the first predetermined time, controlling the transceiver state machine to transmit link determination signals to devices on the communications network.

7. The method of Claim 6, wherein upon detecting the absence of a received signal for a second predetermined time, controlling the transceiver state machine to regulate transceiver power consumption to be at minimized operating power.

8. The method of Claim 7, wherein the data received are link response signals in response to the transceiver sending link determination signals to devices connected to the communications network.

9. The method of Claim 6, wherein upon detecting the presence of a received signal, controlling the transceiver state machine to regulate transceiver power consumption to be at normal operating power.

10. The method of Claim 9, wherein the data received are link response signals in

response to the transceiver sending link determination signals to devices connected to the communications network.

11. The method of Claim 1, wherein the monitoring data received occurs during a time period of minimized power consumption, and upon detecting the presence of a received signal for a predetermined standby time, controlling the transceiver state machine to regulate transceiver power consumption to be at normal operating power.

12. The method of Claim 11, wherein the monitoring data received occurs during a time period of minimized power consumption, and upon detecting the presence of a received signal for a second predetermined time subsequent to the predetermined standby time, controlling the transceiver state machine to regulate transceiver power consumption to be at minimized operating power.

13. A transceiver power consumption regulator for a transceiver in a communications network comprising:

a data received monitor located on the transceiver to detect the presence or absence of a received data signal; and

a transceiver state machine coupled between the data received monitor and transceiver components to regulate transceiver power consumption of the transceiver in response to the presence or absence of the data received detected by the data received monitor.

14. The transceiver power consumption regulator of Claim 13, wherein the data

received monitor monitors data received during a time period of normal operating power consumption, and upon detecting the absence of a received signal for the first
5 predetermined time, controls the transceiver state machine to regulate transceiver power consumption to be at minimized operating power.

10 15. The transceiver power consumption regulator of Claim 13, wherein the data received monitor monitors data received during a time period of normal operating power consumption, and upon detecting the presence of a received signal for the first
15 predetermined time, controls the transceiver state machine to regulate transceiver power consumption to be at normal operating power.

20 16. The transceiver power consumption regulator of Claim 13, wherein the data received monitor monitors data received by comparing a received data signal from the communications network with a reference signal and controls the transceiver state machine when a magnitude of the received data signal exceeds the reference signal.

25 17. The transceiver power consumption regulator of Claim 13, wherein the data received monitor monitors data received during a time period of minimized operating power consumption, and upon detecting the absence of a received signal for the first
30 predetermined time, controls the transceiver state machine to regulate transceiver power consumption to be at minimized operating power.

35 18. The transceiver power consumption regulator of Claim 13, wherein the data received monitor monitors data received during a time period of minimized operating power consumption, and upon detecting the absence of a received signal for the first

predetermined time, controls the transceiver state machine to have link determination signals transmitted by the transceiver to devices on the communications network.

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19. The transceiver power consumption regulator of Claim 18, wherein the data received monitor upon detecting the absence of a received signal for a second predetermined time, controls the transceiver state machine to regulate transceiver power consumption to be at minimized operating power.

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20. The transceiver power consumption regulator of Claim 19, wherein the data received are link response signals in response to the transceiver sending link determination signals to devices connected to the communications network.

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21. The transceiver power consumption regulator of Claim 18, wherein the data received monitor upon detecting the presence of a received signal, controls the transceiver state machine to regulate transceiver power consumption to be at normal operating power.

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22. The transceiver power consumption regulator of Claim 21, wherein the data received are link response signals in response to the transceiver sending link determination signals to devices connected to the communications network.

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23. The transceiver power consumption regulator of Claim 13, wherein the data received monitor monitors data received during a time period of minimized power consumption, and upon detecting the presence of a received signal for a predetermined
35 standby time, controls the transceiver state machine to regulate transceiver power

consumption to be at normal operating power.

5 24. The transceiver power consumption regulator of Claim 23, wherein the data
received monitor monitors data received during a time period of minimized power
consumption, and upon detecting the presence of a received signal for a second
10 predetermined time subsequent to the predetermined standby time, controls the
transceiver state machine to regulate transceiver power consumption to be at minimized
operating power.